UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,219	04/10/2001	Eric Klinker	21089000100	1676

23370 7590 03/09/2006

JOHN S. PRATT, ESQ
KILPATRICK STOCKTON, LLP
1100 PEACHTREE STREET
ATLANTA, GA 30309

EXAMINER	
TSEGAYE, SABA	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/833,219	KLINKER ET AL.	
	Examiner	Art Unit	
	Saba Tsegaye	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3, 5, 7-9, 11-14, 16-25 and 28--33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *19-25* is/are allowed.

6)☒ Claim(s) *3,5,7-9,11-14,16-18 and 28-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/05/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the Applicant's request for reconsideration filed on 11/28/05. Claims 3, 5, 7-9, 11-14, 16-25 and 28-33 are pending. Claims 19-25 are allowed. Claims 3, 5, 7-9, 11-14, 16-18 and 28-33 are rejected.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 16-18 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 31:

The original specification does not describe the limitation "a first path to determine data **flow characteristics** for each of **the first packets** along the first path". Further, the original specification does not describe examining **a second plurality of packet headers** that have been routed to **the destination** a long **a second path; the specification instead discloses that a probe is sent along the second path, not a plurality of packets**.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 16-18 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31, lines 9 and 14, the phrase "combining the data flow characteristics for each of the first packets into a traffic flow for the first path" is vague. It is not clear what is referred by "combining the data flow characteristics", and referred by "the first packets into a traffic flow for the first path".

Claim Rejections - 35 USC § 103

6. Claims 3, 5, 7-9, 11-13, 28-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Host (US 2004/0258226) in view of Schuster et al. (US 6,363,053 B1).

Regarding claim 28, Host discloses, in Fig. 6, a method for maintaining traffic service level for data communicated by a computer network having a source (communication device), the computer network coupled to at least one of a plurality of networks (packet switched network), each of the networks includes a plurality of paths for transporting the data communicated to a destination (B2, B2, C1, C2), the method comprising: comparing a data flow characteristics of a first path to one or more performance metrics to determine whether the data flow characteristics of the first path satisfy the performance metrics (during the call the interface 360a, 360d obtains data regarding the call and forwards this data to the M/R; the M/R system

analyzes the call data for channel quality; if the quality of path over which the packets containing call data travel degrades to an unacceptable level (0072; O107));

indicating a service level violation when the data flow characteristics of the first path fail at least one of the performance metrics (if the quality of path over which the packets containing call data travel degrades to an unacceptable level (0072) 0109-01 10));

comparing the data flow characteristics of the first path to data flow characteristics of a second path to determine an optimized path, wherein the data flow characteristics of the second path are determined by transmitting a probe along the second path to the destination to determine the data flow characteristics of the second path; and routing a second packet to the destination along the optimized path (The M/R system continually monitors the characteristics of the various **paths** between each interface and the M/R system determines the best path to route packets containing important data to complete) (page 5, 0071-0072; page 8, 01 14).

Host, further, discloses that the M/R system continually monitors *the characteristics of the various paths between each interface.* This allows the M/R system to analyze and select the most desirable path to route and/or re-route packets. Packets are routed in various paths and manner by *altering the content of the packet header (0115).*

However, Host fail expressly to disclose examining **a packet header** to determine data flow *characteristics* of the first Path.

Schuster teaches that by transmitting packets from a source site to a destination site an end-to-end delay can be determined (identifying QoS characteristics) by placing a timestamp in each transmitted packet (column 13, lines 15-65; column 7, line 55-column 8, line19).

It would have been obvious to one ordinary skill in the art at the time the invention was made to implement the monitoring of path characteristics in Host's system by the examination of *packet headers* as suggested by Schuster, since a packet header is the easiest and quickest part of a packet that can be processed and examining the header would have increased the efficiency of the Host's system.

Regarding claim 3, Host discloses the method further comprising: storing the data flow characteristics for each of the plurality of paths as statistical data; and retrieving the statistical data (software or hardware modules are utilized to perform data transmission characteristics analysis. An update of the transmission characteristic data is sent to these modules by the M/R system; page 9, 0116).

Regarding claims 5 and 7, Host in view of Schuster discloses all the claim limitations as stated above. Further, Host discloses that the M/R system determines the best path to route packets containing important data to complete the call (after the M/R system determined the best path to route packets, it is inherent to change source address to route from the destination to the source (second packet) using the optimized path). However, Host in view of Schuster does not expressly disclose a routing table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a routing table into Host's router. The benefit of a routing table is that routing and topology information of the routing domain will be maintained.

Regarding claim 8, Host discloses the method wherein the optimized path is an egress path (page 5, 0072).

Regarding claim 9, Host discloses the method wherein one of the pluralities of additional paths is a default rout path (page 5, 0072).

Regarding claim 11, Host discloses the method wherein the probe includes information about the network latency of second path from the source to the destination (page 8, 0108).

Regarding claim 12, Host discloses the method wherein probe includes information about the network loss of the second path from the source to destination (page 5, 0070-0071; page 8, 0108).

Regarding claim 13, Host discloses the method wherein the probe includes information about network jitter of the second path from the source to the destination (page 8, 0108).

Regarding claim 29, Host in view of Schuster discloses all the claim limitations as stated above. Further, Host discloses the M/R system initiates the sending of **ping or other test packets** from one Interface (which comprises a switching system) to another Interface. The switching system comprises **a software**, logic and memory systems to communicate and interact with a computer network in accordance with **IP protocol**. Host does not expressly disclose that the probe comprises one of a Sting probe, a lightweight TCP-based probe and a traceroute probe.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use on of a Sting probe, a lightweight TCP-based probe or a traceroute probe in the monitoring method of Host in order to provide route information and to establish a reliable connection between two points.

Regarding claim 30, Host discloses the method further comprising comparing the data flow characteristics of the first path to data flow characteristics of a plurality of additional paths, wherein the data flow characteristics of each of the plurality of additional paths are determined by transmitting at least one probe along each of the plurality of paths to the destination (page 5, 0071).

Regarding claims 32 and 33, Host in view of Schuster discloses all the claim limitations as stated above. Further, Host discloses that the M/R system can comprise any system capable of communicating with a computer network and executing algorithms embodied in software code (0094).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Host in view of Schuster et al. as applied to claim 28 above, and further in view of Ben Num et al. (6,831,893 B1).

Host in view of Schuster discloses all the claim limitations as stated above. Further, Host discloses that using the test packets, the M/R system determines the best path to route packets containing important data to complete. The M/R system continually monitors the characteristics

of the various paths between each interface. This allows the M/R system to analyze and select the most desirable path to route and/or re-route packets. Further, Host discloses that different types of data other than voice or video data may be transmitted from a first location to a second location (0098). However, Hose in view of Schuster does not disclose determining whether the second packet is a specific traffic type and if so, classifying the second packet as the specific traffic type wherein the specific traffic type is used in routing the second packet.

Ben Nun teaches that a classifier 260 inputs the headers of the data packets and evaluates the headers to determine a specific "flow" corresponding to each of the data packets (for example, data packets transmitted from a source to a first destination belong to a first flow; and data packets from the source to a second destination belong to a second flow) (column 7, lines 36-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to classify the different types of packet of Host in view of Schuster as specific traffic type, as thought by Ben Num. One ordinary skill in the art would have been motivated to do this because it would provide a system that can quickly and efficiently process data packets transmitted on a data network (see Ben Num column 1, lines 10-15; and column 4, lines 27-29).

Allowable Subject Matter

8. Claims 19-25 are allowed.

Response to Arguments

9. Applicant's arguments with respect to claims 3, 5, 7-9, 11-14, 16-18 and 28-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Perlman et al. (US 5,781,534) teaches that network headers have options fields for utilizing a packet as the information gathering mechanism for network path characteristics (column 7, lines 14-28; figs., 3a-ac, 5a).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
January 28, 2006

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600